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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/835,532

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Paul A. Kline

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11/12/2004

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EXAMINER

TRIEU, VAN THANH

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,532

Applicant(s)

KLINE, PAUL A.

Examiner

Van T Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14, 16-21, 23-36 and 38-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14, 16-21, 23-36 and 38-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9/24, 9/27 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 10-12, 14, 16-19, 21, 23, 24, 26-36, 38, 39, 44, 45, 47, 49, 50, 52-60 and 62-64 are rejected under 35 U.S.C. 102(b) as being anticipated by **Armstrong et al** [US 5,856,776].

Regarding claim 10-12, 14, 16-19, 21, 23, 24, 26-36, 38, 39, 44, 45, 47, 49, 50, 52-60 and 62-64, **Amstrong et al** discloses a power line communications system capable of transmitting and receiving of analog/digital signals between the substations 11-1 to 11-3, 12-1 and 12-2 over the intermediate or medium voltage cables 22A and 22B, or over the low voltage cable 22C to a customer resident via the transducers 23A and 23B, which are coupled to the transformers and power lines. The signaling unit 60 is directly coupled to the ID element 36, the first modem 61 and second modem 62, which allows communications over the Internet through computers, see Figs. 1-8, col. 1, lines 55-67, col. 2, lines 53-64, col. 3, lines 16-60, col. 5, lines 29-67, col. 10, lines 37-67, col. 11, lines 1-67 and col. 12, lines 1-4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Armstrong et al** [US 5,856,776] in view of **Nocentino, Jr.** [US 5,592,354].

Regarding claim 13, **Armstrong et al** fails to disclose the communication over the optical fiber. However, **Armstrong et al** teaches that the signals are communicated over the inductive wires/cables 22A-22C, see Figs. 1-8. **Nocentino, Jr.** suggests that the power line communications can be communicated over a variety of transmission media including paired wire, multi-paired cable, coaxial cable, microwave radio and optical fibers, see Figs. 1-6, col. 2, lines 29-40 and col. 4, lines 1-8. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the optical fiber communications cables of **Nocentino, Jr.** for the inductive cables of **Armstrong et al** in order to eliminate of electromagnetic interference EMI while to provide a faster speed of signal transmission.

3. Claims 20, 25, 40-43, 46, 51 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Armstrong et al** [US 5,856,776] in view of **Hylton et al** [US 5,630,204].

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Regarding claims 23, 25, 40-43, 46, 51 and 56, **Armstrong et al** fails to disclose the first modem uses Orthogonal Frequency Division Multiplexing. However, **Armstrong et al** teaches that the second modem 62 communicates between the substations via telephone systems or other communications networks, see col. 1, lines 55-67, col. 11, lines 60-67 and col. 12, lines 1-4. **Hylton et al** suggests that a system and method for providing interactive multimedia services to subscriber premises utilizing power line distribution within the subscriber premises. The service is provided via a communication link delivering to the subscriber premises broadband digital information including audio, video and control signals in a multiplexed form. The multiplexed forme can be Code Division Multiplex Access CDMA, HF-CDMA, and/or SHF-CDMA, wherein the unique spreading codes are orthogonal to one another such that the cross-relation between the spreading codes is approximately zero, see Figs. 1-7, col. 3, lines 50-67, col. 4, lines 1-67, col. 5, lines 1-3, col. 30, lines 13-67 and col. 14, lines 1-46.

Therefore, it would have been obvious to one skill in the art at the time the invention was made to utilize the orthogonal CDMA of **Hylton et al** for the modem communication signal networks of **Armstrong et al** since the signals are in the form of digital signals communicating over a wide networks.

4. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Armstrong et al** [US 5,856,776] in view of **Argyroudis et al** [US 5,748,104]

Regarding claim 48, **Armstrong et al** fails to disclose the communication interface is a backhaul interface. However, **Armstrong et al** suggests that a power line

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communication system capable of transmitting and receiving of analog/digital signals between the substations 11-1 to 11-3, 21-1 and 12-2 over the intermediate or medium voltage cables 22A and 22B, or over the low voltage cable 22C, via the transducers 23A and 23B coupled to the transformers and power lines, see Figs. 1-8. **Argyroudis et al** suggests that power line interface is located inside remote metering unit 102a-102c themselves and the CDMA repeater 118 could be utilized a wire line backhaul interface to base station 118 such as the fiber optic lines, see Figs. 1 and 2, col. 6, lines 10-67 and col. 7, lines 1-27. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the backhaul interface of **Argyroudis et al** for the coupling transceiver of **Armstrong et al** in order to minimize the electromagnetic interference EMI between the adjacent cables/wires, the electromagnetic signals and the radio signals.

Conclusion

5. In response to the DECLARATION PURSUANT TO 37 C.F.R. 1.131 filed on 27 September 2004, new references are introduced to make the rejection smoother.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Smith et al discloses a method for optimizing energy procurement energy demand and energy supply for a facility or complex including medium voltage and low voltage. With

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accumulation of data, contract negotiations with energy suppliers may provide further energy saving. [US 6,785,529]

Brown discloses an overhead balanced electricity distribution and/or power transmission network including telecommunications signals. [US 5,949,327]

Propp et al discloses a power line communication system specially designed for use in local area network having transceivers. [US 4,815,106]

Calabro et al discloses a system for remote reading of data measured by consumption meters, utilizing encoded low power telemetry signals. [US 3,900,842]

7. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

A handwritten signature in black ink, appearing to read 'Van Trieu', with a long horizontal flourish extending to the right.

Van Trieu
Primary Examiner
Date: 11/11/04